



**UNITED STATES DEPARTMENT OF COMMERCE**  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/363,169

07/29/99

NATARAJAN

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EXAMINER

KELLY, C

ART UNIT

PAPER NUMBER

1756

DATE MAILED:

06/20/00

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/363,169

Applicant(s)  
Natarajan et al.

Examiner  
Kelly, C.H.

Group Art Unit  
1721



☐ Responsive to communication(s) filed on \_\_\_\_\_.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-70 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-70 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Claim 50 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term, "large" used in claim 50 is relative and therefore indefinite.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

Claims 1-13, 16, 17-21, 24, 25, 26, 27, 29, 32-40, 41-46, 49, 50, 51, 52-55, 56, 59-62, 64, 67 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omae et al., U.S. pat. No. 5,299,289.

Omae discloses a transmission grating which includes an acrylate monomer, liquid crystal compound, initiators of varying types and chain extending monomer. The difference between the reference and the application is that the reference is not referred to as slanted transmission grating. However, the grating of the reference has all of the components of applicant's grating and the two, however named, would be expected to have the same capabilities. An optical coupling device having a grating with the same components as applicant claims and a voltage source is shown by the reference, although it is not called an optical coupling device. Column 20 of the reference discloses the transparent electrodes and voltage source. The reference includes

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how to make an optical coupling device as instantly claimed. The reference does not name specifically the host of monomers, chain extenders, and co-initiators and photoinitiators as instantly claimed. However, these are well known in the art of polymer dispersed liquid crystals. They are well known initiators and chain extenders in the art of polymerization. It would have been obvious to one of ordinary skill in the art to make the claimed composition given that the reference teaches gratings have the same components as applicant claims.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CAR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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Claims 1-70 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 5,942,157. Although the conflicting claims are not identical, they are not patentably distinct from each other because the grating of the instant claims are included in the hologram of the patented claims. A transmission grating is part of the hologram. The optical coupling device is not unobvious because applicant's have merely added a voltage source to the grating. The aforementioned patent mentions a voltage source.

Claims 1-70 are directed to an invention not patentably distinct from claims 1-28 of commonly assigned 5942157. Specifically, the transmission gratings of the instant invention are included in the hologram materials of the co-assigned patent. Transmission gratings are components in the hologram.

Claims 1-70 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over all of the claims of each copending Application No. 09/033514 (1-39), 09/034014 (1-39), 09/429,645 (1-40) and 09/033512 (1-23). Although the conflicting claims are not identical, they are not patentably distinct from each other because the grating of the instant application although called a slanted transmission grating is the same (same components) as the hologram having a switchable transmission grating of the copending applications. An optical coupling device is not included in the copending cases, however, the device as claimed is a grating with a voltage source. All of the copending cases have a device

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with a voltage source as well as a grating having the same components as applicant instantly claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Commonly assigned 09/033514, 09/033512, 09/429645 and 09/034014, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 37 CFR 1.78© and 35 U.S.C. 132 to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g).

Claims 1-16 and 34-51 and 70 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 27 and 35-44 of copending Application No. 08/814625. Although the conflicting claims are not identical, they are not patentably distinct from each other because the hologram of copending application contains the same components and a grating as instantly claimed.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-16 and 34-51 and 70 are provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 08/814625 which has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e) if patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future patenting of the conflicting application.

This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by a showing of a date of invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131.

The present application is drawn to a switchable transmission grating comprising certain components of polymerizable monomer, photoinitiator, co-initiator, chain extending monomer, and liquid crystal compound. The copending application discloses a hologram having these same components. Although the hologram does not specifically mention the grating, the components make up the grating and so the grating is there, even if not pointed out. It would have been obvious to one of ordinary skill in the art to make the claimed invention given that the reference teaches the same components for a device which includes gratings.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Kelly whose telephone number is (703) 308-0449. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff, can be reached on (703) 308-2464. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

C.H. Kelly

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CH Kelly